

ORDINANCE NO. 2531

An ordinance amending the Zoning Code of the City of Broken Arrow, Oklahoma, Article VIII, by creating Section 21, et seq., by adopting new lighting standards for private projects in Broken Arrow, and amending Article II by adding definitions relevant to the lighting standards, repealing all ordinances or parts of ordinances in conflict herewith, and declaring an emergency.

SECTION I. BE IT ORDAINED BY THE COUNCIL OF THE CITY OF BROKEN ARROW that Broken Arrow Zoning Code, Article II Section 1, is amended by adding the following definitions to the existing text, with the additions to read as follows:

Exterior Lighting: Temporary or permanent lighting that is installed, located or used in such a manner to cause light rays to illuminate outside areas. Fixtures that are installed indoors that are intended to illuminate something outside are considered exterior lighting for the intent of this Ordinance.

Fixture: The assembly that holds the lamp in a lighting system. It includes the elements designed to give light output control, such as a reflector (mirror) or refractor (lens), the ballast, housing, and the attachment hardware.

Foot-candle: The ratio of the quantity of light, measured in lumens to the surface area in square feet on which the lumens are falling. One foot-candle = one lumen per square foot. Foot-candle light densities are measurable with an illuminance meter.

Glare: Intense light that results in discomfort and/or a reduction of visual performance and visibility.

Light trespass: Unwanted light emitted by a luminary, falling beyond the boundary of the property, that exceeds the standards contained herein.

Recessed: When a light is built into a structure or portion of a structure such that the light source is fully contained within the structure and no part of the light source extends or protrudes beyond the underside of a structure or portion of a structure.

Partially Shielded: The lamp of the fixture is shielded by a translucent material and is only partially visible from outside the structure. Light may be emitted at the horizontal level of the lamp.

Shielded: When the light emitted from the fixture is projected below a horizontal plane running through the lowest point of the fixture where light is emitted. The lamp is not visible from outside the fixture with a shielded light fixture, and no light is emitted above the horizontal plane of the fixture. Also considered a full cut-off fixture.

Temporary Lighting: Lighting that is intended to be used for a special event for seven (7) days or less.

Up Lighting: Lighting that is directed in such a manner as to emit light rays above the horizontal plane.

SECTION II. BE IT ORDAINED BY THE COUNCIL OF THE CITY OF BROKEN ARROW that Broken Arrow Zoning Code, Article VIII, is hereby amended by adding a new section to be codified as Section 21, which Section and subsections to read as follows:

ARTICLE VIII, Section 21: OUTDOOR LIGHTING STANDARDS;

21.1--PURPOSE

The purpose of this ordinance shall be to establish standards for the use of outdoor lighting facilities that serve private developments, to promote the following land use and public policy goals: providing adequate lighting for customer, pedestrian and driver use; provide for the efficient use of energy; mitigate light trespass, nuisance, and glare to adjacent properties; and reduce light pollution to the general community and mitigate effects to the night sky.

21.2--GENERAL LIGHTING STANDARDS

Applicant may use either the "Fixture Height Standard" or the "Photometric Standard." Either method used shall provide sufficient and safe illumination for vehicle movement and pedestrian safety. Special care is to be taken to avoid light trespass and glare onto adjacent properties and into public rights-of-way. Light poles shall not be placed in street rights-of-way or utility easements adjacent to street rights-of-way, except by franchised utility companies or by the City of Broken Arrow, as a part of a street lighting project. Light poles may be placed in other utility easements with the approval of the Planning Commission; and if light poles are allowed to be placed in utility easements, a note shall be placed on the face of the site plan stating the following: "Property owner(s) assumes all liability and replacement responsibilities for any damage to light poles placed in utility easements." Planning Staff may approve outdoor lighting after site plan review as directed by the Planning Commission.

Single-family, duplex development projects, franchised public utility companies when working on public utility lighting for public utility purposes in utility easements, and outdoor recreational facilities (public or private) are expressly exempt from the requirements of this Section.

Outdoor lighting plans may be required for customer and employee safety. If no lighting is proposed, a note shall be placed upon the face of the site plan indicating that outdoor lighting is not required. After review by the Planning Commission an outdoor lighting plan may be required.

Illumination of the perimeter of the site shall be reduced in intensity when adjacent to lesser intensive uses or public rights-of-way measured in foot-candles (fc) at three (3) feet above grade as follows for either the fixture height or the photometric standard:

1. Site adjoining another non-residential zoning district – 3.0 fc
2. Site adjoining agricultural/residential zoning districts – 0.5 fc
3. Site adjoining public rights-of-way – 3.0 fc

21.3-LIGHTING LEVEL MEASUREMENTS

Light levels shall be measured with a direct-reading, portable light meter, calibrated within the last year by an independent laboratory regularly engaged in the calibration of such instruments. The meter's sensor shall be located at the top of the visual screening fence on the property line (or at a height of 3 feet above the surrounding local grade if there is no fence), aimed towards the commercial property in horizontal position. Readings shall be recorded after the value has stabilized. Measurements are made after establishment of darkness with the light sources to be measured illuminated, and then with those light sources extinguished. The difference between these two readings will then be compared to the maximum allowed illumination at the property line.

In this way, contributions to light levels by the moon and other ambient light sources are eliminated and the light intensity from the sources in question can be determined.

21.4-Fixture Height Standard: All outdoor lighting shall be by shielded fixtures. Light fixtures shall be parallel to the final grade and installed so that no direct light will shine beyond the subject property. The height of light poles and fixtures shall be approved through the site plan process. Planning staff may approve outdoor lighting plan as directed by the Planning Commission as a condition of the site plan approval.

The submitted lighting plan shall include the following:

1. A scale drawing of the site with all outdoor lighting locations shown;
2. Fixture specifications, including catalog cut-sheets or generic standards;
3. Pole type and height of fixture from base of the pole;
4. Lamp type and size; and
5. Fixture mounting, and orientation.

Allowable heights of light fixtures shall be measured from the light-emitting surface to the base of the pole location as follows:

1. Maximum height of sixteen (16) feet, within fifty (50) feet of agricultural/residential zoned districts, or public right-of-way;
2. Maximum height of twenty (20) feet, within fifty-one (51) feet to two hundred fifty (250) feet of agricultural/residential zoned districts, or public right-of-way;
3. Maximum height of thirty-five (35) feet, if located a minimum two hundred fifty-one (251) feet from agricultural/residential zoned districts, or public right-of-way;
4. Maximum fixture height shall not exceed thirty-five (35) feet; and
5. Canopy lighting shall be by recessed fixtures with diffusers that do not extend below the canopy surface.

21.5-Photometric Standard: A photometric plan is required to be submitted unless the "fixture height standard" is utilized. If the "photometric standard" is desired to increase pole heights, the applicant shall submit a photometric plan in sufficient detail to evaluate it's conformance with standards and guidelines as set forth below. The photometric plan shall include the following:

1. A scale drawing of the site with all outdoor lighting locations shown;
2. Fixture specifications, including catalog cut-sheets or generic standards;
3. Lamp type and size;
4. Fixture mounting heights, mounting orientation, and tilt angles if applicable;
5. A representative point-by-point illumination array for the site showing property lines and off site lighting impacts;
6. The maximum fixture height shall not exceed thirty-five (35) feet as measured from the base of the fixture to the base of the pole;
7. Canopy lighting shall use recessed fixtures with diffusers that do not extend below the canopy surface.

SECTION II. Any ordinance or parts of ordinances found to be in conflict herewith are hereby repealed.

SECTION III. An emergency exists for the preservation of the public health; peace and safety and therefore this ordinance shall become effective from and after the time of its passage and approval.

PASSED AND APPROVED and the emergency clause ruled upon separately this 19th day of May, 2003.

DATED this 19th day of May, 2003.